

WASHINGTON DEPARTMENT OF ECOLOGY
ENVIRONMENTAL ASSESSMENT PROGRAM
FRESHWATER MONITORING UNIT
STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 29A070
STATION NAME: Rock Creek at Stevensen
WATER YEAR: 2011
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Introduction

Watershed Description

Operation of station started on June 18, 2008. Stage was recorded on a Design Analysis® data logger every fifteen minutes. Staff gage (primary) and laser level (secondary) readings were made routinely for the duration of the period of record.

Gage Location

Ecology's telemetry stream gage on Rock Creek is located at river mile 1.0, upriver from the town of Stevenson on Allen Road. Gage is located on the upstream side of bridge.

Table 1.

Drainage Area (square miles)	42
Latitude (degrees, minutes, seconds)	45 41 55
Longitude (degrees, minutes, seconds)	121 54 18

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	281
Median Annual Discharge (cfs)	225
Maximum Daily Mean Discharge (cfs)	1,560
Minimum Daily Mean Discharge (cfs)	8
Maximum Instantaneous Discharge (cfs)	1,840
Minimum Instantaneous Discharge (cfs)	8
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	716
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	12
Percent of Time Discharge is Greater Than Range of Ratings	3
Percent of Time Discharge is Less Than Range of Ratings	0

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Narrative

Flows were highest during the months of March and April with daily averages of 674 and 597 cfs, respectively. The highest reported daily flow occurred on March 30. The lowest daily flows occurred September 12 and 13.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	1.5%
Weighted Rating Error (% of discharge)	17.3%
Total Potential Error (% of discharge)	18.8%

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	2			
Period of Ratings	8-04-09/3-27-12			
Range of Ratings (cfs)	8 to 925			
No. of Defining Measurements	22			
Rating Error (%)	17.3%			

Rating Table No.				
Period of Ratings				
Range of Ratings (cfs)				
No. of Defining Measurements				
Rating Error (%)				

Narrative

One rating was effective the entire water year.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	6.35
Maximum Recorded Stage (feet)	15.14
Range of Recorded Stage (feet)	8.79
Number of Un-Reported Days	4
Number of Days Qualified as Estimates	0
Number of Days Qualified as Unreliable Estimates	0

Narrative

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Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	
Range of Modeled Stage (feet)	
Range of Modeled Discharge (cfs)	
Valid Period for Model	
Model Confidence	

Surveys

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date

Activities Completed

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